

Listing of the Claims:

Below is a listing of the claims including the text associated with cancelled claims 1-31. The claims are further notated in bold font as explained in the Remarks section of this paper.

1. (Cancelled) A method of controlling electronic mail (e-mail) message transmission over a network comprised of:

[¶ A] receiving a first set of encoded e-mail addresses;

[¶ B] compiling a second set of encoded e-mail addresses to which an e-mail message should not be sent; and

[¶ C] removing from said first set of encoded e-mail addresses, each encoded e-mail address that is in said second set of encoded e-mail addresses thereby yielding a third set of encoded e-mail addresses to which an e-mail message may be sent.

2. (Cancelled) The method of claim 1 wherein said step of receiving a first set of encoded e-mail addresses includes the step of:

receiving a first set of hash coded e-mail addresses.

3. (Cancelled) The method of claim 1 wherein said step of receiving a first set of encoded e-mail addresses includes the step of:

receiving hash coded e-mail addresses from an e-mail mass mailer.

4. (Cancelled) The method of claim 1 further comprised of the steps of:

[¶ A] sorting said first set of encoded e-mail addresses into a first ordered list of encoded e-mail addresses wherein said encoded e-mail addresses are in ascending order;

[¶ B] sorting said second set of encoded e-mail addresses into a second ordered list of encoded e-mail addresses wherein encoded e-mail addresses are in ascending order; and

[¶ C] beginning with a first entry in said first ordered list of encoded e-mail addresses, and beginning with a first entry in said second ordered list, comparing the first entry in said first ordered list to the first entry in said second ordered list then successive entries in said second ordered list, until the value of an entry in said second ordered list equals or exceeds the value of the first entry in said first list; and

[¶ D] removing the first entry from said first list upon the detection in said second ordered list of the first entry in said first ordered list, thereby yielding a third set of encoded e-mail addresses to which an e-mail message may be sent.

5. (Cancelled) The method of claim 1 further including the step of: sending said third set of encoded e-mail address to an e-mail mass mailer via a data network.

6. (Cancelled) The method of claim 1 further including the step of identifying e-mail address that are encoded in said third set of encoded e-mail addresses.

7. (Cancelled) A method of controlling electronic mail (e-mail) message transmission over a network comprised of:

receiving a first set of hash codes, each of which represents an e-mail addresses;

receiving a second set of hash codes, each of which represents an e-mail addresses to which an e-mail message should not be sent; and

removing from said first set of hash codes, each hash code that is in said second set thereby yielding a third set of hash codes, each of which represents an e-mail addresses to which an e-mail message may be sent.

8. (Cancelled) The method of claim 7 wherein said step of receiving a first set of hash codes includes the step of:

receiving a first set of hash codes from a mass e-mailer, each of which represents an e-mail address.

9. (Cancelled) The method of claim 7 further comprised of the steps of:

- i) sorting said first set of hash codes into a first ordered list of hash codes;
- ii) sorting said second set of hash codes; and
- iii) beginning with a first entry in said first ordered list of hash codes and beginning with a first entry in said second ordered list, comparing the first entry in said first ordered list of hash codes to said first entry in said second ordered list of hash codes and successive entries in said second ordered list of hash codes, until the value of an entry in said second ordered list equals or exceeds the value of the first entry in said first list, or until the last entry in the second ordered list of hash codes has been compared; and
- iv) upon the detection in said first ordered list of hash codes, of an entry in said second ordered list of hash codes that is identical to said first entry in said first ordered list, removing the first entry from said first ordered list.

10. (Cancelled) The method of claim 7 further including the step of: sending said third set of encoded e-mail address to an e-mail mass mailer via a data network.

11. (Cancelled) A method of controlling electronic mail (e-mail) message transmission over a network comprised of:

receiving a first set of hash codes, each of which represents an e-mail addresses;

receiving a second set of hash codes, each of which represents an e-mail addresses to which an e-mail message should not be sent; and

creating a third set of hash codes that is comprised of the first set of hash codes minus hash codes that appear in the second set of hash codes, said third set of hash codes, representing e-mail addresses to which an e-mail message may be sent.

12. (Cancelled) The method of claim 11 wherein said step of receiving a first set of hash codes includes the step of:

receiving a first set of hash codes from a mass e-mailer, each of which represents an e-mail address.

13. (Cancelled) The method of claim 11 further comprised of the steps of:

[¶ A] i) sorting said first set of hash codes into a first ordered list of hash codes;

[¶ B] ii) sorting said second set of hash codes into a second ordered list of hash codes; and

[¶ C] iii) creating a third set of hash codes by the steps of:

copying entries of said first ordered list of hash codes into a third set of hash codes that do not exist in said second ordered list of hash codes.

14. (Cancelled) The method of claim 11 further including the step of: sending said third set of encoded e-mail address to an e-mail mass mailer via a data network.

15. (Cancelled) A method of controlling electronic mail (e-mail) message transmission over a data network comprised of:

receiving a first set of hash codes from an e-mail mass mailer, said first set of hash codes being received via said data network;

comparing said first set of hash codes to a second set of hash codes; and

removing from said first set of hash codes, hash codes that are in said second set of hash codes to yield a third set of hash codes to which an e-mail message may be sent.

16. (Cancelled) The method of claim 16 further comprised of the step of: sending said third set of hash codes back to said e-mail mass mailer.

17. (Cancelled) The method of claim 16 wherein said first and second sets of hash codes are comprised of alpha-numeric characters and are of the same length.

18. (Cancelled) A method of controlling electronic mail (e-mail) message transmission over a data network comprised of:

receiving a first set of hash codes from an e-mail mass mailer, said first set of hash codes being received via said data network;

comparing said first set of hash codes to a second set of hash codes; and

creating a third set of hash codes that is comprised of hash codes in said first set of hash codes that are not in said second set of hash codes.

19. (Cancelled) The method of claim 19 further comprised of the step of: sending said third set of hash codes back to said e-mail mass mailer.

20. (Cancelled) The method of claim 19 wherein said first and second sets of hash codes are comprised of alpha-numeric characters and are of the same length.

21. (Cancelled) A method of controlling electronic mail (e-mail) message transmission over a network comprised of:

receiving a first set of hash coded e-mail addresses;

compiling a second set of hash coded e-mail addresses to which an e-mail message should not be sent;

identifying hash coded e-mail addresses in said first set of hash coded e-mail addresses that do not appear in said second set of hash coded e-mail addresses; and

removing from said first set of hash coded e-mail addresses, each hash coded e-mail address that is not in said second set of hash coded e-mail addresses thereby yielding a third set of hash coded e-mail addresses to which an e-mail message may be sent;

22. (Cancelled) The method of claim 22 further including the step of: sending said third set of hash coded e-mail address to an e-mail sender via a data network.

23. (Cancelled) A method of sending an electronic mail (e-mail) message to a plurality of e-mail addresses comprised of:

[¶ A] hash coding a first list of e-mail addresses to yield a first list of hash coded e-mail addresses;

[¶ B] transmitting said first list of hash coded e-mail addresses to an e-mail address filtration service provider.

24. (Cancelled) An apparatus for controlling electronic mail (e-mail) message transmission over a network comprised of:

[¶ A] a computer, operatively coupled to a data network and capable of receiving there from, a first set of encoded e-mail addresses;

[¶ B] a first memory device, operatively coupled to said computer, said first memory device storing a second set of encoded e-mail addresses to which an e-mail message should not be sent; and

[¶ C] said first memory device also storing program instructions which when executed cause said computer to:

[¶ D] store in said first memory device, at least part of said first set of encoded e-mail addresses;

[¶ E] remove from said first set of encoded e-mail addresses stored in said memory, each encoded e-mail address in said second set of encoded e-mail addresses that is also in said first set

of encoded e-mail addresses thereby yielding a third set of encoded e-mail addresses, said third set of encoded e-mail addresses being encoded e-mail addresses to which an e-mail message may be sent; and

[¶ F] store at least part of said third set of encoded e-mail addresses in said memory.

25. (Cancelled) The apparatus of claim 25 further including a first memory device that stores program instructions which when executed cause said computer to sort said first set of encoded e-mail addresses.

26. (Cancelled) An apparatus for controlling electronic mail (e-mail) message transmission over a network comprised of:

a computer, operatively coupled to a data network and capable of receiving there from, a first set of hash codes, said computer also being capable of executing program instructions;

a first memory device, operatively coupled to said computer, said first memory device storing a second set of hash codes; and

said first memory device also storing program instructions which when executed cause said computer to:

store in said first memory device, at least part of said first set of hash codes;

remove from said first set of hash codes, each hash code in said second set of hash codes, yielding a third set of hash codes, said third set of hash codes representing e-mail addresses to which an e-mail message may be sent; and

store at least part of said third set of encoded e-mail addresses in said memory.

27. (Cancelled) The apparatus of claim 27 further including a first memory device that stores program instructions which when executed cause said computer to compare e-mail addresses that have been encoded using a hash code algorithm.

28. (Cancelled) The apparatus of claim 27 further including a memory device that stores program instructions which when executed cause said computer to sort hash codes that represent e-mail addresses.

29. (Cancelled) The apparatus of claim 27 further including a memory device that stores program instructions which when executed cause said computer to hash code a variable-length string of an e-mail address into a fixed-length string of alpha-numeric characters.

30. (Cancelled) The method of claim 1 further including the step of: prior to the step of receiving said first set of encoded e-mail addresses, specifying an e-mail address domain name and purging from said first set of encoded e-mail addresses, all e-mail addresses having said domain name.

31. (Cancelled) The method of claim 7 further including the step of: prior to the step of receiving said first set of hash codes, specifying an e-mail address domain name and purging all e-mail addresses having said domain name.

32. (Previously Presented) A method of controlling electronic mail (e-mail) message transmission over a network comprising:

encoding, [Claim 23 ¶ A, Claim 27, Claim 29] by a third entity using an encoding algorithm, a third set of e-mail addresses to which an e-mail address should not be sent; [Claim 1 ¶ B]

receiving, by said third entity, a first set of encoded e-mail addresses from said first entity [Claim 1 ¶ A] and said second set of encoded e-mail addresses from said second entity, wherein said first set of encoded e-mail addresses were encoded using said encoding algorithm [Claim 23 ¶ A, Claim 27, Claim 29] and further represent e-mail addresses to which an e-mail message could be sent [Claim 1 ¶ A] and wherein said second set of encoded e-mail addresses were encoded using said encoding algorithm [Claim 23 ¶ A, Claim 27, Claim 29] and further represent e-mail addresses to which an e-mail address should not be sent; and [Claim 1 ¶ B]

generating, by said third entity, a fourth set of encoded e-mail addresses representing e-mail addresses to which said e-mail message may be sent, wherein said fourth set of encoded e-mail addresses comprises encoded e-mail addresses that are in said first set of encoded e-mail addresses but not in said second set of encoded e-mail addresses or in said third set of encoded e-mail addresses. [Claim 1 ¶ C]

33. (Previously Presented) The method of claim 32, further comprising:
sending, by said third entity, to each of a first entity and a second entity said encoding algorithm for encoding e-mail addresses.

34. (Previously Presented) The method of claim 32, wherein:
said first entity is an e-mail mass mailer; [Claim 3]
said second entity is a source of said e-mail message; and
said third entity is an e-mail list manager.

35. (Previously Presented) The method of claim 32, wherein generating, by said third entity, said fourth set of encoded e-mail addresses to which said e-mail message may be sent comprises:

sorting said first set of encoded e-mail addresses into a first ordered list of encoded e-mail addresses wherein said encoded e-mail addresses are in ascending order; and [Claim 4 ¶ A]

sorting at least one of said second set of encoded e-mail addresses and said third list of encoded e-mail addresses into at least one of a second and third ordered list of encoded e-mail addresses wherein encoded e-mail addresses are in ascending order. [Claim 4 ¶ B]

36. (Previously Presented) The method of claim 35, wherein generating, by said third entity, said fourth set of encoded e-mail addresses to which said e-mail message may be sent further comprises:

removing the first entry from said first list upon a detection in said at least one of said second and third ordered lists of the first entry in said first ordered list; [Claim 4 ¶ D]

beginning with a first entry in said first ordered list of encoded e-mail addresses, and beginning with a first entry in said at least one of said second and third ordered lists, comparing the first entry in said first ordered list to the first entry in said at least one second and third ordered lists then successive entries in said at least one of said second and third ordered lists, until a value of an entry in said at least one of second and third ordered lists equals or exceeds a value of the first entry in said first list; and [Claim 4 ¶ C]

removing the first entry from said first list upon a detection in said at least one of said second and third ordered lists of the first entry in said first ordered list. [Claim 4 ¶ D]

37. (Previously Presented) The method of claim 35, wherein generating, by said third entity, said fourth set of encoded e-mail addresses to which said e-mail message may be sent

further comprises copying entries of said first ordered list of encoded e-mail addresses into said fourth set of encoded e-mail addresses that do not exist in said at least one of said second and third ordered lists of encoded e-mail addresses. **[Claim 13 ¶ C]**

38. (Previously Presented) The method of claim 32, wherein:
said encoding algorithm is a hashing algorithm; and **[Claim 2]**
said first, second, third and fourth sets of encoded e-mail addresses are first, second, third and fourth sets of hash codes, respectively. **[Claim 2]**

39. (Previously Presented) The method of claim 35,
said encoding algorithm is a hashing algorithm; and **[Claim 2]**
wherein said first, second and third ordered lists of encoded e-mail addresses are first, second and third ordered lists of hash codes, respectively. **[Claim 2]**

40. (Previously Presented) The method of claim 38, wherein said first, second, third and fourth sets of hash codes are comprised of alpha-numeric characters and are of the same length. **[Claim 17]**

41. (Previously Presented) A method of controlling electronic mail (e-mail) message transmission over a network comprising:

 sending, by a third entity, to each of a first entity and a second entity an encoding algorithm for encoding e-mail addresses;
 encoding, **[Claim 23 ¶ A, Claim 27, Claim 29]** by a first entity using said encoding algorithm, a first set of e-mail addresses to which an e-mail message could be sent; **[Claim 1 ¶ A]**

encoding, [Claim 23 ¶ A, Claim 27, Claim 29] by a second entity using said encoding algorithm, a second set of e-mail addresses to which an e-mail message should not be sent;

[Claim 1 ¶ B]

encoding, [Claim 23 ¶ A, Claim 27, Claim 29] by said third entity, a third set of e-mail addresses to which an e-mail address should not be sent; **[Claim 1 ¶ B]**

receiving, by said third entity, said first set of encoded e-mail addresses and said second set of encoded e-mail addresses; and **[Claim 1 ¶ A]**

generating, by said third entity, a fourth set of encoded e-mail addresses representing e-mail addresses to which said e-mail message may be sent, wherein said fourth set of encoded e-mail addresses comprises encoded e-mail addresses that are in said first set of encoded e-mail addresses but not in said second set of encoded e-mail addresses or in said third set of encoded e-mail addresses. **[Claim 1 ¶ C]**

42. (Previously Presented) The method of claim 41, wherein:

said first set of e-mail addresses was previously obtained by said first entity independent of said second entity; and

said second set of e-mail address was previously obtained by said second entity independent of said first entity.

43. (Previously Presented) The method of claim 41, further comprising:

specifying an e-mail address domain name; **[Claim 30]**

prior to receiving, by said third entity, said first set of encoded e-mail addresses, purging one of: **[Claim 30]**

all e-mail addresses in said first set of e-mail address having said domain name; and

[Claim 30]

all encoded e-mail addresses in said first set of encoded e-mail addresses associated with e-mail addresses having said domain name. **[Claim 30]**

44. (Previously Presented) The method of claim 41, further comprising:
sending said fourth set of encoded e-mail addresses to said first entity via a data network;

[Claim 5]

identifying, by said first entity, e-mail addresses that are encoded in said fourth list of encoded e-mail addresses; and

c-mailing said message to said identified e-mail addresses.

45. (Previously Presented) The method of claim 41, wherein:

said first entity is an e-mail mass mailer; **[Claim 3]**

said second entity is a source of said e-mail message; and

said third entity is an e-mail list manager.

46. (Previously Presented) The method of claim 41, wherein:

said encoding algorithm is a hashing algorithm; and **[Claim 2]**

said first, second, third and fourth sets of encoded e-mail addresses are first, second, third and fourth sets of hash codes, respectively. **[Claim 2]**

47. (Previously Presented) A method of controlling electronic mail (e-mail) message transmission over a network comprising:

encoding, **[Claim 23 ¶ A, Claim 27, Claim 29]** by a third entity using an encoding algorithm, a third set of e-mail addresses to which an e-mail address should not be sent; **[Claim 1 ¶ B]**

receiving, by said third entity, a first set of encoded e-mail addresses from said first entity **[Claim 1 ¶ A]** and said second set of encoded e-mail addresses from said second entity, wherein

said first set of encoded e-mail addresses represent e-mail addresses to which an e-mail message could be sent [Claim 1 ¶ A] and wherein said second set of encoded e-mail addresses represent e-mail addresses to which an e-mail address should not be sent; and [Claim 1 ¶ B]

generating, by said third entity, a fourth set of encoded e-mail addresses representing e-mail addresses to which said e-mail message may not be sent, wherein said fourth set of encoded e-mail addresses comprises encoded e-mail addresses that are in one of said second set of encoded e-mail addresses and third set of encoded e-mails but not in said first set of encoded e-mail addresses. [Claim 1 ¶ C]

48. (Previously Presented) The method of claim 47, further comprising:
sending, by said third entity, to each of a first entity and a second entity said encoding algorithm for encoding e-mail addresses;

49. (Previously Presented) The method of claim 47, wherein:
said first entity is an e-mail mass mailer; [Claim 2]
said second entity is a source of said e-mail message; and
said third entity is an e-mail list manager.

50. (Previously Presented) The method of claim 47, wherein:
said encoding algorithm is a hashing algorithm; [Claim 2]
said first, second, third and fourth sets of encoded e-mail addresses are first, second, third and fourth sets of hash codes, respectively; and [Claim 2]

 said first, second, third and fourth sets of hash codes are comprised of alpha-numeric characters and are of the same length. [Claim 17]

51. (Previously Presented) A method of controlling electronic mail (e-mail) message transmission over a network comprising:

sending, by a third entity, to each of a first entity and a second entity an encoding algorithm for encoding e-mail addresses;

encoding, [Claim 23 ¶ A, Claim 27, Claim 29] by a first entity using said encoding algorithm, a first set of e-mail addresses to which an e-mail message could be sent; [Claim 1 ¶ A]

encoding, [Claim 23 ¶ A, Claim 27, Claim 29] by a second entity using said encoding algorithm, a second set of e-mail addresses to which an e-mail message should not be sent; [Claim 1 ¶ B]

encoding, [Claim 23 ¶ A, Claim 27, Claim 29] by said third entity using said encoding algorithm, a third set of e-mail addresses to which an e-mail address should not be sent; [Claim 1 ¶ B]

receiving, by said third entity, said first set of encoded e-mail addresses and said second set of encoded e-mail addresses; and [Claim 1 ¶ A]

generating, by said third entity, a fourth set of encoded e-mail addresses representing e-mail addresses to which said e-mail message may not be sent, wherein said fourth set of encoded e-mail addresses comprises encoded e-mail addresses that are in one of said second set of encoded e-mail addresses and third set of encoded e-mails but not in said first set of encoded e-mail addresses. [Claim 1 ¶ C]

52. (Previously Presented) The method of claim 51, wherein:

said first set of e-mail addresses was previously obtained by said first entity independent of said second entity; and

said second set of e-mail address was previously obtained by said second entity independent of said first entity.

53. (Previously Presented) The method of claim 51, further comprising:
specifying an e-mail address domain name; **[Claim 30]**
prior to receiving, by said third entity, said first set of encoded e-mail addresses, purging
one of: **[Claim 30]**
all e-mail addresses in said first set of e-mail address having said domain name; and
[Claim 30]
all encoded e-mail addresses in said first set of encoded e-mail addresses associated with
e-mail addresses having said domain name. **[Claim 30]**

54. (Previously Presented) The method of claim 51, further comprising:
sending, to said first entity via a data network, said fourth set of encoded e-mail addresses
representing said e-mail addresses that said e-mail message may not be sent; **[Claim 5]**
identifying, by said first entity, e-mail addresses that said e-mail message may be sent
based on the fourth set of encoded e-mail addresses; and
e-mailing said message to said identified e-mail addresses.

55. (Previously Presented) The method of claim 51, wherein:
said first entity is an e-mail mass mailer; **[Claim 3]**
said second entity is a source of said e-mail message; and
said third entity is an e-mail list manager.

56. (Previously Presented) The method of claim 51, wherein:
said encoding algorithm is a hashing algorithm; and **[Claim 2]**
said first, second, third and fourth sets of encoded e-mail addresses are first, second, third
and fourth sets of hash codes, respectively. **[Claim 2]**

57. (Previously Presented) An apparatus for controlling electronic mail (e-mail) message transmission over a network comprising:

a third computer operatively coupled to a data network and to memory, wherein said memory contains program instructions such that when executed by said first computer, said third computer is operative to: [Claim 24 ¶¶ A, C]

encode [Claim 23 ¶ A, Claim 27, Claim 29] using an encoding algorithm a third set of e-mail addresses to which an e-mail address should not be sent; [Claim 24 ¶ B]

receive a first set of encoded e-mail addresses from said data network [Claim 24 ¶ A] and said second set of encoded e-mail addresses from said data network [Claim 24 ¶ B], wherein said first set of encoded e-mail addresses were encoded using said encoding algorithm and further represent e-mail addresses to which an e-mail message could be sent and wherein said second set of encoded e-mail addresses were encoded using said encoding algorithm and further represent e-mail addresses to which an e-mail address should not be sent; and [Claim 24 ¶¶ A, B]

generate a fourth set of encoded e-mail addresses representing e-mail addresses to which said e-mail message may be sent, wherein said fourth set of encoded e-mail addresses comprises encoded e-mail addresses that are in said first set of encoded e-mail addresses but not in said second set of encoded e-mail addresses or in said third set of encoded e-mail addresses.

[Claim 24 ¶ E]

58. (Previously Presented) The apparatus of claim 57, wherein said program instructions, when executed by said third computer, further cause said computer to send, to each of a first computer coupled to the data network and a second computer on the data network said encoding algorithm for encoding e-mail addresses.

59. (Previously Presented) The apparatus of claim 57, wherein

said first computer is associated with an e-mail mass mailer; **[Claim 3]**

said second computer is associated with a source of said e-mail message; and

said third computer is associated with an e-mail list manager.

60. (Previously Presented) The apparatus of claim 57, wherein:

said encoding algorithm is a hashing algorithm; **[Claim 2]**

said first, second, third and fourth sets of encoded e-mail addresses are first, second, third and fourth sets of hash codes, respectively; and **[Claim 2]**

said first, second, third and fourth sets of encoded e-mail addresses are first, second, third and fourth sets of has codes, respectively. **[Claim 2]**

61. (Previously Presented) The apparatus of claim 57, wherein:

said first set of e-mail addresses was previously obtained by said first entity independent of said second entity; and

said second set of e-mail address was previously obtained by said second entity independent of said first entity.

62. (Previously Presented) The apparatus of claim 57, wherein said programming instructions, when executed by said third computer, further cause said third computer to:

specifying an e-mail address domain name associated with e-mail address to which said e-mail address should not be sent; and **[Claim 30]**

sending said e-mail address to said first computer.

63. (Previously Presented) The apparatus of claim 57, wherein said programming instructions, when executed by said third computer, further causes said third computer to send said fourth set of encoded e-mail addresses to said first entity via a data network. **[Claim 5]**